

WE CLAIM:

1. A method of forming an article, the method comprising:
providing a molding composition comprising inorganic fiber and an inorganic binder; and
compression molding the molding composition into the article.
2. The method of claim 1, wherein the molding composition comprises inorganic fiber, inorganic binder, and carrier solvent.
3. The method of claim 1, wherein the inorganic fibers are glass fibers, ceramic fibers, refractory fibers, refractory ceramic fibers, mineral fibers, or mixtures thereof.
4. The method of claim 3, wherein the inorganic fiber comprises chopped fiber glass.
5. The method of claim 1, wherein the binder comprises silica, sodium, calcium, and magnesium based binders, or mixtures thereof.
6. The method of claim 4, wherein the binder comprises colloidal silica.
7. The method of claim 2, wherein the carrier solvent comprises water.
8. The method of claim 2, wherein the moldable composition has a moisture content in the range of 20 to 35% by weight of the total composition.
9. The method of claim 8, wherein the moldable composition has a moisture content in the range of 25 to 27% by weight of the total composition.

10. The method of claim 1, wherein the ceramic fiber article is an article for use in a fireplace assembly, a grill assembly, a campfire assembly, or a burner assembly.

11. The method of claim 10, wherein the ceramic fiber article is a combustion chamber for a fireplace, a fireplace box, a fireplace door, a fireplace surround, a fireplace log, a fireplace burner or a fireplace refractory member.

12. A method of forming an article, the method comprising:
providing a molding composition comprising inorganic fibers and a binder; and
compression molding the molding composition into the article, wherein at least 75% by weight of the molded article is inorganic material.

13. The method of claim 12, wherein at least 90% by weight of the molded article is inorganic material.

14. The method of claim 12, wherein at least 95% by weight of the molded article is inorganic material.

15. A method of forming an article, the method comprising:
providing a molding composition comprising inorganic fibers and a binder;
compression molding the molding composition into the article such that the binder cures;
wherein the cured binder is capable of withstanding temperatures of at least 600° F without significant degradation or deterioration due to heat.

16. The method of claim 15, wherein the cured binder is capable of withstanding temperatures of at least 800° F without significant degradation or deterioration due to heat.

17. The method of claim 15, wherein the binder comprises and inorganic binder.

18. The method of claim 15, wherein the article is a combustion chamber for a fireplace, fireplace box, a fireplace door, a fireplace surround, a fireplace log, a fireplace burner or a fireplace refractory member.

19. A method of forming an article, the method comprising:
providing a molding composition comprising inorganic fibers and a binder;
compression molding the molding composition into the article;
wherein the article is capable of withstanding temperatures of at least 600° F without significant degradation or deterioration due to heat.

20. The method of claim 19, wherein the article is capable of withstanding temperatures of at least 800° F without significant degradation or deterioration due to heat.

21. The method of claim 19, wherein the article is a combustion chamber for a fireplace, a fireplace box, a fireplace door, a fireplace surround, a fireplace log, a fireplace burner or a fireplace refractory member.

22. The method of claim 19, wherein the binder comprises an inorganic binder.

23. An article made by the method of compression molding of claim 1.

24. An article made by the method of compression molding of claim 12.

25. An article made by the method of compression molding of claim 15.

26. An article made by the method of compression molding of claim 19.

27. An article comprising a monolithic combustion chamber enclosure including at least 3 panels, wherein the article is compression molded.
28. An article comprising a monolithic firebox including at least 3 panels, wherein the article is compression molded.
29. An article comprising a monolithic gas burner panel, wherein the article is compression molded.
30. A molding composition for use in compression molding an article, said composition comprising:
 - in the range of 25 % or less by wt. inorganic fiber;
 - in the range of 10 to 40 % by wt. binder;
 - in the range of 15 to 45 % by wt. carrier solvent; and
 - in the range of 0 to 70 % by wt. additional additives.
31. The composition of claim 30, wherein the binder is an inorganic binder.
32. The composition of claim 30, wherein the additional additives includes an inorganic filler, and the inorganic filler is in the range of 15 to 70% by weight of the total composition.
33. The composition of claim 30, wherein the additional additives includes an organic polymer, and the organic polymer is in the range of 0.1 to 0.5 by weight of the total composition.
34. The composition of claim 33, wherein the organic polymer is an acrylic polymer.

35. The composition of claim 33, wherein the organic polymer act as a molding thickener to help the composition hold shape when it is being molded.
36. The composition of claim 30, wherein the carrier solvent is water.
37. The composition of claim 36, wherein the composition has a moisture content in the range of 20 to 35% by weight of the total composition.
38. The composition of claim 37, wherein the composition has a moisture content 23 to 30% by weight of the total composition.
39. The composition of claim 38, wherein the composition has a moisture content in the range of 25 to 27% by weight of the total composition.